293-IS™ Transfection Reagent

Product Name	293-IS™ Transfection Reagent
Catalog No	IT-100-001
Description	293-IS is a cationic-polymer-based transfection reagent specifically formulated and optimized to work with 293 suspension cells and to perform transient transfection for large scale protein production.
Advantages	■ High efficiency transfection and high level protein production ■ Very low toxicity ■ Optimized for serum-free medium ■ Quick and robust procedure ■ No requirement of changing and adding medium after transfection ■ Scale-up free from 1 liter shake flask culture to large volume bioreactor culture ■ Cost effectiveness
Components	■ 293-IS (one vial, 1ml) ■ DNA diluent (one bottle, 25ml)
Storage	Store components at 4^{o}C.
Stability	293-IS Transfection Reagents are stable for at least 1 year at 4^{o}C.
Use Limitation	For research use only, not for use in diagnostic procedures.
Materials not supplied	HEK293 suspension cells (invitrogen™ R790-07 or equivalent); Serum-free medium (invitrogen™ 12338-018 or equivalent); Shake flasks (125ml: Corning® 431143; 2-liter: Corning® 431255; or equivalent); 37^{o}C incubator including an orbital shaker with 8% CO_2.

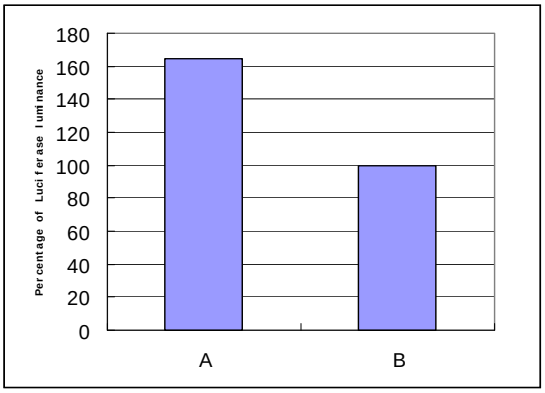

Figure 1. Percentage comparison of luciferase expression of HEK-293 suspension cells transfected with pCMV-Luciferase plasmid by using either 293-IS transfection reagent (A) or a lipid-based transfection reagent from a leading competitor (B).

293-IS™ Transfection Protocols

Protocol for 20 ml Pilot Expression

1. On the day of transfection and 2 hour prior to add the transfection complexes into the culture, seed 20 ml cells at 1×10^6 cells/ml into a 125ml polycarbonate disposable shake flask with fresh and pre-warmed serum-free medium. Place the shake flask containing cell culture in a 37°C incubator on an orbital shaker set at 125 rpm with 8% CO_2.
2. For each transfection culture, prepare DNA/293-IS complexes by performing the following:
   - Add 10 μg DNA into 0.5 ml DNA Diluent and mix gently.
   - Add 20 μl 293-IS to the diluted DNA and mix gently.
   - Incubate for 20 minutes at room temperature.
3. After the DNA/293-IS complex incubation is complete, add the entire complexes to the 20 ml culture.
4. Incubate the culture in a 37°C incubator on an orbital shaker set at 125 rpm with 8% CO_2.
5. Harvest cells or media (if the protein is secreted) at approx 72 to 96 hours post-transfection (or collect samples at the desired time points) for protein expression analysis.

Protocol for 1 liter Culture Protein Production

1. On the day of transfection and 2 hour prior to add the transfection complexes into the culture, seed 1 liter cells at 1×10^6 cells/ml into a 2-liter polycarbonate shake flask with fresh and pre-warmed serum-free medium. Place the shake flask containing cell culture in a 37°C incubator on an orbital shaker set at 125 rpm with 8% CO_2.
2. For each transfection culture, prepare DNA/293-IS complexes by performing the following:
   - Add 1 mg DNA into 25 ml DNA Diluent and mix gently.
   - Add 1 ml 293-IS to the diluted DNA and mix gently.
   - Incubate for 20 minutes at room temperature.
3. After the DNA/293-IS complex incubation is complete, add the entire complexes to the 1 liter culture.
4. Incubate the culture in a 37°C incubator on an orbital shaker set at 125 rpm with 8% CO_2.
5. Harvest cells or media (if the protein is secreted) at approx 72 to 96 hours post-transfection or optimized time point from pilot expression for further protein purification.